FACT SHEET

# Livestock Guardian Dogs

## What is a livestock guardian dog?

*While this publication refers specifically to sheep and the predation problems associated with sheep production, guardian dogs have also been shown to be effective guardians of other livestock species such as goats, ostriches, cattle and even elk and bison.*

Livestock guardian dogs originated in Europe and Asia, where they have been used for centuries to protect sheep from wildlife. A livestock guardian dog is not a herding dog or a pet, but rather a full-time member of the flock.

Guardian dogs protect livestock by barking and scent-marking and by patrolling the pasture and pursuing any predator that threatens the flock. To fully utilize the protective instincts of the guardian dog, a strong bond must be formed between it and the livestock.

Guardian dogs are not herding dogs. Independent behaviour is encouraged and human bonding is kept to a minimum. The dog remains with the sheep because it has been raised with them since puppyhood and considers itself a member of the flock. Its protective behaviour is largely instinctive and relatively little formal training is required other than timely correction of undesirable behaviour such as biting or wandering. A dog's success as a livestock guardian is the result of a quality genetic background combined with proper rearing and bonding with the flock.

Guardian dogs were bred to perform one specific task – guarding livestock – and never gained the wide-spread popularity of other, more sociable breeds. Consequently, most breeds of guardian dogs are completely unfamiliar to North Americans. Regardless of the breed, all guardian dogs have similar characteristics. They are large (75-120 lbs.), imposing in appearance and typically have long white coats and short dark muzzles.

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The three behavioural traits of a successful guardian dog are trustworthiness, attentiveness and aggressiveness. The dog must be trusted not to harm the livestock with which it lives. It must be attentive to the livestock, accompanying them or knowing their location at all times. Additionally, the dog must be sufficiently aggressive against any potential predator.

## Potential Benefits and Problems

The effectiveness of a guardian dog will depend on its disposition, instinct and age and on management and pasture conditions (such as size and availability of cover for predators). A guardian dog should not be seen as an immediate or total solution to predator problems. The owner must be committed to establishing the dog as a member of the flock. The benefits of a guardian dog are not generally realized without a considerable investment of time and patience. However, once a guardian dog is established as the "shepherd" of the flock, it will quickly become invaluable.

***Benefits of using guardian dogs:***

- reduced predation;
- reduced producer labour;
- ability to graze land that predators had previously rendered unuseable;
- discontinuation of night confinement; leading to more efficient use of pasture;
- opportunity to increase the size of the flock due to increase in grazeable acres;
- increased profit;
- increased self-reliance in managing predator problems; and
- peace of mind.

***Consider these challenges with a new dog:***

- bonding the dog to the flock takes time and patience;
- there is a slim chance the dog may harass, injure or kill livestock;
- the dog may wander away from the flock, possibly even beyond farm boundaries, potentially causing problems with neighbours;
- the dog may be overprotective of the flock or territory and aggressive to people;
- it is a significant financial expenditure with no guarantee of success;
- the guardian dog may conflict or interfere with other dogs (pets or working dogs); and
- other predation control methods must be compatible (e.g. traps and snares can kill dogs).

## Choosing Your Guardian Dog

It is important to understand the distinction between herding dogs and guardian dogs. Herding dogs (e.g. border collies, Australian shepherds) move sheep from one area to another by chasing or barking at them. They are generally not left alone with the sheep. Guardian dogs are discouraged from chasing and barking at sheep are not usually used for herding and act independently of people.

It is strongly recommended that a first-time owner of a guardian dog starts with a single puppy so that both the human and the dog can learn together. If additional dogs are needed, they can be added later.

Any guardian dog should be purchased from a reputable breeder. Inquire if the breeder will guarantee against hereditary and congenital defects and possibe non-performance.

## Selection Guidelines

*Behaviour* - A guardian dog's behaviour is the combined result of instinct and conditioning. The most influential conditioning period is during the first few months of the dog's life.

The ideal guardian dog is intelligent, alert and confident. It must act independently and react instinctively to protect the flock.

While a predisposition towards independent behaviour is essential for a good guardian dog, this trait can make some dogs relatively hard-headed and unresponsive to verbal commands.

Conditioning as a puppy and familiarization with the handler can help eliminate such problems in the mature dog. For example, training the dog to tie is important should it need veterinary attention.

*Breed* - The table below summarizes the various characteristics of guardian dog breeds. While a cross between two guardian dog breeds will produce a successful guardian dog, crosses between a guardian dog and another breed will inherit the traits of both and, therefore, may not be effective.

### Summary of the character traits of guardian dog breeds

| | | Effectiveness | | | Economics | | | Stays with Sheep | | | Aggressive to... | | Dog injures... | | Other Problems | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Breed | Number of Dogs | Very | Somewhat | Not | Asset | Breakeven | Liability | Mostly | Usually | Rarely | Predators | Dogs | Sheep | People | None | Minor | Major |
| Great Pyrenees | 437 | 71 | 22 | 7 | 83 | 11 | 6 | 53 | 24 | 23 | 95 | 67 | 7 | 4 | 42 | 47 | 11 |
| Komondor | 138 | 69 | 1 | 12 | 82 | 8 | 10 | 50 | 23 | 27 | 94 | 77 | 24 | 17 | 38 | 48 | 14 |
| Akbash | 62 | 69 | 22 | 9 | 71 | 12 | 12 | 71 | 12 | 17 | 100 | 92 | 20 | 6 | 36 | 49 | 15 |
| Anatolian Shepherd | 56 | 77 | 13 | 10 | 82 | 8 | 10 | 69 | 16 | 15 | 96 | 86 | 14 | 9 | 42 | 48 | 10 |
| Maremma | 20 | 70 | 20 | 10 | 84 | 5 | 11 | 79 | 16 | 5 | 94 | 94 | 20 | 5 | 58 | 24 | 18 |
| Shar | 11 | 40 | 30 | 30 | 50 | 0 | 50 | 30 | 20 | 50 | 88 | 89 | 33 | 25 | 40 | 40 | 20 |
| Kuvasz | 7 | 57 | 29 | 14 | 80 | 0 | 20 | 33 | 33 | 34 | 100 | 67 | 40 | 0 | 0 | 86 | 14 |
| Hybrid | 23 | 87 | 4 | 9 | 84 | 5 | 11 | 70 | 13 | 17 | 95 | 85 | 18 | 0 | 43 | 38 | 19 |
| Other | 9 | 43 | 29 | 28 | 20 | 20 | 60 | 33 | 17 | 50 | 83 | 100 | 43 | 29 | 17 | 50 | 33 |
| Total | 763 | 71 | 21 | 8 | 82 | 9 | 9 | 55 | 22 | 22 | 95 | 74 | 14 | 7 | 41 | 46 | 13 |

Note: All numbers are percentages, except for the "Number of Dogs" column.
Source: *Livestock Guarding Dogs: Protecting Sheep from Predators* by Jeffery S. Green and Roger A. Woodruff, USDA Agricultural Bulletin No. 544, 1990.

*Gender* - The sex of the guardian dog is a matter of the owner's personal preference; however, the sex of other dogs on the farm should be taken into consideration. Generally, guardian and herding dogs are able to work on the same operation. They should be familiar with each other but should be discouraged from playing together.

There is no indication that neutering affects a guardian dog's abilities and is recommended unless there are plans to breed the dog. Neutering reduces the tendency to wander and males attracted to a bitch in heat may add to the predator problem.

## Bonding a Guardian Dog with Livestock

The goal in conditioning the new puppy is to channel its natural instincts with the desired characteristics to produce a mature guardian dog. This is accomplished by **early and continuous association** with sheep to develop a bond between the animals. This bonding period is critical. Dogs form strong social bonds early in life. During this early development phase, permanent emotional attachments are easily and rapidly formed.

Data from one study suggests that the process begins at three weeks, peaks at six to eight weeks and levels off by 12 weeks. The pup must be bonded with the animals it is to guard before it is two months old. If this bond is not developed, the dog may not stay with the flock.

The ideal place to rear a puppy is a small pen or corral from which it cannot escape. The pen should contain three to six sheep, preferably lambs (orphans are ideal) or sheep that will not be aggressive towards the young puppy (e.g. replacement ewe lambs). If the puppy is unable to escape, the bond with sheep will develop more easily. Later, when the dog is placed in larger pastures where it can leave, it is less likely to return to the farm house. The puppy's pen need not be much larger than 150 sq. ft., although more room will become necessary as the puppy grows. Sheep should be rotated through the pen, thereby exposing the puppy to a number of sheep in its flock. This provides an opportunity to train the sheep to accept the dog as a flock member.

After the initial socialization period, when the puppy is approximately 16 weeks old, it and the sheep with which it has been raised should be put into a larger area or with the rest of the flock. The dog will respond to its new freedom by exploring, but should always return to the flock within a reasonable time. If it does not, the puppy should be returned to the flock and encouraged to remain. The puppy should be checked several times a day for the first few days that it is with the flock and then at least daily thereafter to ensure that it is finding food and water easily and that the sheep and dog are interacting properly. During these daily checks, it is permissible to pat the dog but excessive handling should be avoided.

An automatic dog feeder is often a good investment. It will hold a week or two of dog food and the puppy will be less likely to associate its owner with its food than if it was being fed daily. Place the puppy's food and water where the sheep cannot access it.

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Should a puppy become overly aggressive or playful with the sheep, or take to wandering excessively, several corrective measures could be taken.

A dog should understand what "NO" means and should stop whatever it is doing when the command is given. Shaking it gently by the scruff of the neck or swatting it with a rolled up newspaper will reinforce the "NO" command. A dog should also be taught to come when it is called or at least to remain where it is so it can be caught.

It is recommended that a dog be taught to walk on a leash or at least be tie-broken for times when the sheep or dog need to be moved or when the dog needs veterinary treatment or attention. Owners should be consistent and decisive when giving commands and should expect a consistent response from the dog. If punishment is to be effective, it must be given within seconds of the undesirable behaviour.

In general, a guardian dog will stay with the sheep approximately 85 per cent of the time and patrol the perimeter 15 per cent of the time. The dog will often appear to be sleeping during the day, but it will still be aware of what is happening with its flock.

***To summarize:***

- be prepared to commit time and effort to the training;
- minimize human contact. A guardian dog is not a pet and it is important to establish this fact from the outset;
- bond the dog to the livestock not the owner;
- give it some obedience training. (Complete independence of a large dog is not desirable); and
- ensure the health and safety of the dog throughout its lifetime. It is an investment.

## Saskatchewan Guardian Dog Sources

The Saskatchewan Sheep Development Board can provide prospective owners with a list of Saskatchewan breeders. Currently the most popular breeds of guardian dogs are: Great Pyrenees, Komondor, Maremma, Akbash, Anatolian Shepherd and Kuvasz.

## Other Species of Guardian Animals

Horses, donkeys and llamas have shown anti-predator tendencies; however, they are also prey species and their usefulness rests primarily with their ability to raise the alarm. They cannot cross fences and are not usually nocturnal.

It is also important to recognize that their effectiveness is diminished in larger pastures and herds or against groups of predators. They are sometimes rough on sheep. While these species may work for some individuals, guardian dogs remain the protector of choice.

This factsheet is only intended to outline a few points to consider before purchasing a guardian dog. There are numerous books that deal specifically with training guardian dogs.

It is recommended that a potential owner consult the additional information sources outlined in this publication.

**For More Information:**

***Livestock Guarding Dogs: Protecting Sheep from Predators, 1998.***
Jeffery S. Green and Roger A. Woodruff.
USDA Agricultural Information Bulletin No. 588.
This reference book is highly recommended.

***Sheep Production Handbook, 1992.***
American Sheep Industry
6911 South Yosemite St.
Englewood, CO. 80112
A highly recommended binder of production and management information including a section on predation intervention.

***Coyote Predation of Livestock***
Alberta Agriculture, Food and Rural Development Publications Office
7000 - 113 St.
Edmonton, Alberta
T6H 5T6
780-427-0391

***Ain't Life Grand with a Great Pyrenees Guarding the Flock, 1992.***
Beverly Coate
C&C Farms, Rt. 4 - Box 6815, Stigler, Oklahoma, 74462

***Livestock Protection Dogs: Selection, Care and Training, 1990.***
David E. Sims and Orysia Dawydiak.
OTR Publications. Ft. Payne, Alabama.

**These reference materials are available from:**

**Saskatchewan Sheep Development Board**
2213C Hanselman Court
Saskatoon, SK S7K 2H6
Phone: (306) 933-5200
E-mail: sheepdb@sk.sympatico.ca

The Saskatchewan Sheep Development Board also provides other resource material as well as courses on predator management. Contact them for more information.

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**To learn more about other predation management options, contact your local conservation officer or Saskatchewan Environment at 1-800-567-4224.**

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